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EXAMINER

RICHARD, CHARLES R

ART UNIT PAPER NUMBER

1712

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/647,830

Applicant(s)

PATEL ET AL.

Examiner

C. R. Richard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 23-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11-22, 31 and 34 is/are rejected.
- 7) ☐ Claim(s) 5-6, 9-10 and 32-33 is/are objected to.
- 8) ☒ Claim(s) 23-30 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-22 and 31-34, drawn to compositions/well fluids containing a shale hydration inhibiting compound and methods using this composition for shale inhibition, classified in class 507, subclass 133.
- II. Claims 23-26, drawn to a composition containing a swellable shale, classified in class 516, subclass 77.
- III. Claims 27-30, drawn to a method of disposing of drill cuttings, classified in class 175, subclass 66.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a solids free surfactant composition and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds

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one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Inventions I or II and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case inventions I and II can be used in other methods such as in well treating operations like fracturing.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Applicant's attorney, Carter White, on July 8, 2005, a provisional election was made without traverse to prosecute the invention of group I (claims 1-22 and 31-34). Affirmation of this election must be made by Applicant in replying to this Office action. Claims 23-30 are withdrawn from further consideration by the Examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Information Disclosure Statement

2. No information disclosure statement has been received to date for the present application. Of course, if Applicant is unaware of relevant prior art, then none is required.

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Applicant discloses in the specification at page 18 that the oxa amines of the present invention are commercially available from Champion Chemicals and has provided tradenames for same. The Examiner has made a search and is not able to locate information about these materials under these tradenames. Is Applicant aware of any other names that these materials may be sold under? Manufacturers sometimes sell the same materials under multiple names, sometimes even under customer specific names. The Examiner would also appreciate having copies of product literature that Applicant may have or know about (if any) sent along also.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 16 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In both of these claims, Applicant recites "further comprising a viscosifying agent", yet the corresponding independent claims (15 and 18) each recite "a viscosifying agent". It is uncertain what Applicant intended here. Are one or two distinct agents required by the rejected claims? Examination on the merits will proceed on the basis that only one is required; note that use of a second may be obvious from a teaching of the use of one.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Collet in US Patent 4,049,716. Collet discloses polyamine ether compounds (oxa amines) useful in making additives for lubricants and methods of making these polyamines.

The polyamine ethers of Collet are represented by formula (I) in column 1. Particularly relevant are the compounds corresponding where R1 and R2 are both H, and R is either the first or second of the three choices given, and R' is any of the first three of the four choices given. Tris-(3-oxa-6-amino-hexyl)-amine, N-(2-hydroxyethyl)-N,N-bis-(3-oxa-6-amino-hexyl)-amine and N,N-bis-(2-hydroxyethyl)-N-(3-oxa-6-amino-hexyl)-amine are specifically named as examples (see column 3, line 63 to column 4, line 7); note that in this style of nomenclature, the oxygen is counted along with the carbons in the ether (oxa) segments when naming the segment, so 5 carbons interrupted by an oxygen is named hexyl. The specifically named examples cited here correspond to the first three structures shown in claim 7 among others in other claims.

The polyamine ethers of Collet may be prepared by cyanoethylation of alkanolamines by acrylonitrile followed by hydrogenation (see column 1, lines 44-60).

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Possible alkanolamines include diethanolamine and triethanolamine, with the latter a preferred species (column 2, lines 18-32). The hydrogenation is preferably done in the presence of a strong base in an aqueous medium (see column 3, lines 34-39); thus, the polyamine ether will be in a basic aqueous medium when produced and is inherently in sufficient concentration to be capable of reducing shale swelling.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1, 4-8, 11-22, 31 and 34 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2, 7-11, 13-15 of U.S. Patent No. 6,831,042 to Patel et al. Although the conflicting claims are not identical, they are not patentably distinct from each other.

All the limitations of rejected claims 1 and 7 in proper context are taught in both Patel claims 1 and 2 when $x=0$, $y=1$ and R' is 2 carbon alkylene/ethylene, as well as in both Patel claims 10 and 11 when R' is 2 carbon alkylene/ethyl[ene]. Rejected claim 4 is then obvious over both Patel claims 7 and 13. Rejected claim 5 is similarly obvious over both Patel claims 8 and 14, as starch and other organic polymers may act as viscosifying agents. Rejected claim 6 is similarly obvious over both Patel claims 9 and 15.

All the limitations of rejected claims 8 and 14 in proper context are taught in both Patel claims 1 and 2 when $x=0$, $y=1$ and R' is 2 carbon alkylene/ethylene, as well as in both Patel claims 10 and 11 when R' is 2 carbon alkylene/ethyl[ene]. Rejected claim 11 is then obvious over both Patel claims 7 and 13. Rejected claim 12 is similarly obvious over both Patel claims 8 and 14, as starch and other organic polymers may act as viscosifying agents. Rejected claim 13 is similarly obvious over both Patel claims 9 and 15.

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All the limitations of rejected claim 15-16 in proper context are taught in Patel claim 8 when $x=0$, $y=1$ and R' is 2 carbon alkylene/ethylene, as well as in both Patel claim 14 when R' is 2 carbon alkylene/ethyl[ene]; of course, starch and other organic polymers may function as viscosifying agents. Rejected claim 17 is obvious over both Patel claim 8 in combination with Patel claim 9 and Patel claim 14 in combination with Patel claim 15; Patel claims 9 and 15 list common weighting agents and Patel claims 8 and 14 recite a weighting agent by via dependency.

All the limitations of rejected claim 18-19 in proper context are taught in Patel claim 8 when $x=0$, $y=1$ and R' is 2 carbon alkylene/ethylene, as well as in both Patel claim 14 when R' is 2 carbon alkylene/ethyl[ene]; of course, starch and other organic polymers may function as viscosifying agents and the resulting combination would of course function as a fracturing fluid. Rejected claim 20 is obvious over both Patel claim 8 in combination with Patel claim 9 and Patel claim 14 in combination with Patel claim 15; Patel claims 9 and 15 list common weighting agents and Patel claims 8 and 14 recite a weighting agent by via dependency.

All the limitations of rejected claim 21 in proper context are taught in both Patel claims 1 and 2 when $x=0$, $y=1$ and R' is 2 carbon alkylene/ethylene, as well as in both Patel claims 10 and 11 when R' is 2 carbon alkylene/ethyl[ene], except for the drilling step itself. This simple step would have been obvious to one of ordinary skill in the art from the teaching that the fluid is a drilling fluid. Rejected claim 22 is similarly obvious over both Patel claims 9 and 15.

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All the limitations of rejected claim 31 in proper context are taught in both Patel claims 1 and 2 when $x=0$, $y=1$ and R' is 2 carbon alkylene/ethylene, as well as in both Patel claims 10 and 11 when R' is 2 carbon alkylene/ethyl[ene], except for the circulating step. This simple step would have been obvious to one of ordinary skill in the art from the teaching that the amine is a shale inhibitor and in a drilling fluid. Rejected claim 34 is then obvious over both Patel claims 7 and 13.

9. Claims 1, 4, 6-8, 11, 13-14, 21-22, 31 and 34 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 25-27 and 30-33 of copending Application No. 11/008008 (hereinafter '8008). Although the conflicting claims are not identical, they are not patentably distinct from each other.

All of the limitations of rejected claims 1 and 7 in proper context are taught in description of the composition of both '8008 claims 25 and 30 when the amine is defined by the second structure given and R is C_2 alkyl[ene]. Rejected claim 4 is then obvious over both '8008 claims 26 and 31. Similarly, rejected claim 6 is then obvious over both '8008 claims 27 and 32.

All of the limitations of rejected claims 8 and 13-14 in proper context are taught in description of the composition of both '8008 claims 25 and 30 when the amine is defined by the second structure given and R is C_2 alkyl[ene], except for the weighting agent. The weighting agent for use in these fluids is taught in both '8008 claims 27 and 32. From these teachings and the notoriously well known fact that weighting agents are

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often used in well fluids, it would have been obvious to one of ordinary skill in the art to add the weighting agent of either '8008 claims 27 and 32 to the fluids of '8008 claims 25 and 30. Rejected claim 11 is then obvious from the additional teaching of either '8008 claim 26 or 31.

All of the limitations of rejected claims 21 and 22 are taught by the '8008 claim 25 when the amine is defined by the second structure given and R is C2 alkyl[ene], except for the weighting agent. This agent is taught in '8008 claim 27. From these teachings and the notoriously well known fact that weighting agents are often used in well fluids, it would have been obvious to one of ordinary skill in the art to add the weighting agent of '8008 claim 27 to the fluids of '8008 claims 25.

All of the limitations of rejected claim 31 are taught by both '8008 claims 30 and 33 when the amine is defined by the second structure given and R is C2 alkyl[ene]. Rejected claim 34 is then obvious over '8008 claim 31.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

10. Claims 5-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Note that rejection for obviousness type double patenting must be handled also.

11. Claims 8, 11-15, 17-18, 20-22, 31 and 34 are allowable over the cited prior art, but note rejections for obviousness type double patenting must be handled.

12. Claims 16 and 19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. Note that rejections for obviousness type double patenting must be handled also.

13. Claims 9-10 and 32-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Note the base claims here were rejected for obviousness type double patenting, so the claims objected to here might be made allowable by a proper handling of the double patenting rejection of the base claims.

Conclusion

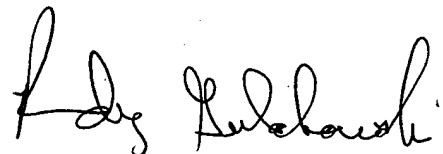
14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See form PTO-892.

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to C. R. Richard whose telephone number is 571-272-8502. The Examiner can normally be reached on M-Th, 8am-6pm and alternate Fridays, 8am -5pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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